

**APPROVED**

by Academic Council

Igor Sikorsky Kyiv Polytechnic Institute
(meeting protocol № __ from _____ 2020)

Head of Academic Council

____ Mykhaylo ILCHENKO

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"**CURRICULUM**

(Enrolment 2020)

Level Bachelor**Speciality** Electric power engineering, electrical engineering and electromechanics**Educational and Professional program** _____Electromechanical Automation Systems, Electrical Drive and Electromobility**Graduation Department** Automation of Electromechanical Systems and Electrical Drives**Form of study** full-time

(full-time, part-time)

Faculty (Institute) Faculty of electric power engineering and automatics**Qualification** Bachelor in electric power engineering, electrical engineering and electromechanics**Study duration** 3 years 10 months**Base level** Full Secondary Education**I. Schedule of educational process**

YEAR	September				October				November					December				January					February					March					April					May				June				July				August			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	
I																			E	E	H	H																		E	E	H	H	H	H	H	H	H	H	H	H	H	
II																			E	E	H	H																		E	E	H	H	H	H	H	H	H	H	H	H	H	
III																			E	E	H	H																		E	E	H	H	H	H	H	H	H	H	H	H	H	
IV																			E	E	H	H																		E	E	H	H	H	H	H	H	H	H	H	H	H	
Symbols:					Learning period				E	Examination				P	Practice				R	Research				A	Assessment				H	Holiday																							

II. Summary table of time budget (Weeks)

YEAR	Learning period	Examination	Practice	Assessment	Research	Holiday	Total
I	36	4				12	52
II	36	4				12	52
III	36	4				12	52
IV	27	3	5	4	2	2	43

III. Practice

Type of practice	YEAR	Weeks
Pre-diploma Practice	IV	5

IV. Graduates assessment

Subjects	Form of graduates assessment (exam, graduation project)	YEAR
Diploma Project	Defence of Diploma Project	IV

V. Plan of Educational process

Code	Educational components	Distribution for terms (semesters)				ECTS Credits	Number of hours				
		Exams	Final tests	Individual task	Module test		Total	Lectures/practical lessons			Self-study
								Lectures	Practical	Laboratory	
1	2	3	4	5	6	7	8	9	10	11	12
1. NORMATIVE educational components											
1.1. General training cycle											
ZO1	Ukrainian Language for Professional Purposes		1		1	2	60	18	18		24
ZO2	History of Ukraine		2		2	2	60	18	18		24
ZO3	Physical Education		2,4		1,3	5	150		144		6
ZO4	Foreign Language		2,4		1,3	6	180		144		36
ZO5	Economics and Production Organization		7		7	3	90	36	18		36
ZO6	Fundamentals of Labor Safety and Civil Defence		6		6	4	120	36	28	8	48
ZO7	Higher Mathematics	1,2,3		1,2,3	1,2,3	18	540	162	162		216
ZO8	General Physics	1,2		2	1,2	9	270	90	18	36	126

ZO9	Computing and Programming	1	2	1,2	1,2	12	360	72	36	72	180
ZO10	Engineering Graphics		1	1	1	3	90	36	18		36
ZO11	Technical Mechanics		1		1	3	90	36	18		36
ZO12	Electrotechnical Materials		2		2	3	90	36		18	36
ZO13	Fundamentals of Metrology and Electrical Measurements	3			3	4	120	36		18	66
ZO14	Theoretical Fundamentals of Electrical Engineering	2,3		2,3	2,3	10	300	72	54	36	138
ZO15	Electric Machines	4		4	4	6	180	72		36	72
ZO16	Electrical Equipment of Electric Power Stations and Substations	5		5	5	4	120	36		18	66
ZO17	Electrical Drive	5		5	5	4	120	36	18	18	48
ZO18	Electrical Systems and Networks	6		6	6	6	180	54		18	108
ZO19	Relay Protection and Automation of Power Systems		7	7	7	4	120	36		18	66
1.2. Vocational training cycle											
PO1	Control Theory		3		3	6	180	72	18	18	72
PO2	Logic Circuits Synthesis		3	3	3	3	90	36	18		36
PO3	Modeling and Analysis of Electromechanical Systems in MATLAB	4			4	3,5	105	36		18	51
PO4	Automation Systems	4,5		5	4,5	11	330	72	36	54	168
PO5	Microprocessor Technologies		5		5	3	90	36		18	36
PO6	Electrical Drives Theory	6			6	5,5	165	54	18	18	75
PO7	Control of Electrical Drives	6,7			6,7	10	300	108	18	36	138
PO8	Industrial Electromechanical Systems	7	8	7	7,8	8	240	90	18	18	114
PO9	Energy conversion control in green technologies and electric vehicles	8		8	8	3,5	105	36			69
PO10	Coursework on Control Theory		3			1	30				30
PO11	Coursework on Automation Systems		4			1	30				30
PO12	Coursework on Microprocessor Technologies		5			1	30				30
PO13	Coursework on Electrical Drives Theory		6			1	30				30
PO14	Courseproject on Control of Electrical Drives		7			1,5	45				45
PO15	Coursework on Industrial Electromechanical Systems		8			1	30				30
PO16	Pre-diploma Practice		8			6	180				180
PO17	Diploma Project					6	180				180
TOTAL of NORMATIVE educational components		21	24	18	38	180	5400	1422	820	476	2682
2. ELECTIVE educational components											
2.1. General training cycle (Optional subjects from University catalogue)											
ZV1	Optional subject #1 from U-Catalogue		4		4	2	60	18	18		24
ZV2	Optional subject #2 from U-Catalogue		4		4	2	60	18	18		24
ZV3	Optional subject #3 from U-Catalogue		3	3	3	2	60	18	18		24
ZV4	Optional subject #4 from U-Catalogue		6		6	2	60	18	18		24
ZV5	Foreign Language for Professional Purposes	8	6		5,7	6	180		126		54
2.2. Vocational training cycle (Optional subjects from Faculty catalogue)											
PV1	Optional subject #1 from F-Catalogue		3		3	4	120	36		36	48
PV2	Optional subject #2 from F-Catalogue		4		4	2,5	75	36		18	21
PV3	Optional subject #3 from F-Catalogue		4	4	4	5	150	54	18	18	60
PV4	Optional subject #4 from F-Catalogue		5		5	2	60	36			24
PV5	Optional subject #5 from F-Catalogue		5		5	4,5	135	54		18	63
PV6	Optional subject #6 from F-Catalogue		5		5	4	120	36		18	66
PV7	Optional subject #7 from F-Catalogue		6	6	6	3	90	36	18		36

PV8	Optional subject #8 from F-Catalogue		6	6	6	3	90	18	36		36
PV9	Optional subject #9 from F-Catalogue	7		7	7	5	150	36		36	78
PV10	Optional subject #10 from F-Catalogue		7		7	4	120	54			66
PV11	Optional subject #11 from F-Catalogue		8		8	4	120	54			66
PV12	Optional subject #12 from F-Catalogue	8			8	5	150	36		18	96
TOTAL of ELECTIVE educational components		3	15	5	18	60	1800	558	270	162	810
TOTAL		24	39	23	56	240,0	7200	1980	1090	638	3492

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Head of the Department _____ / Serhii Peresada /

Dean of the Faculty _____ / Oleksandr Yandulsky /